Contents

1 The Germination of Northern Bronzes 1
1.1 Different Bronze Systems in Eurasia 3
1.1.1 Eastern Bronze Culture System 4
1.1.2 Western Bronze Culture System 4
1.1.3 Bronze Culture System During the Late Prehistoric Period 5
1.2 Research Background Beyond China Related to Chinese Early Bronzes 6
1.2.1 Early Bronzes of the Oasis Culture in Southern Central Asia 7
1.2.2 Early Bronzes of the Steppe Culture 12
1.2.3 Seriation of Some Early Bronzes 19
1.3 The Formation of Different Systems of Early Chinese Bronzes . . . 23
1.3.1 Central Plain Bronze System During the Xia Period 23
1.3.2 Northern Bronze System During the Xia Period 24
1.3.3 Early Bronzes of the Northwestern Bronze System During the Xia Period 28
1.3.4 The Relationship Among the Bronzes of the Central Plain and the Northern Zone and Those of the Northwestern Bronze System During the Xia Period 30
1.4 Relationship Between the Early Bronzes from China and those Outside of China 33
1.4.1 Relationship Between the Bronzes of the Qijia Culture and those Outside of China 34
1.4.2 Relationship Between the Bronzes of the Siba Culture, the Tianshanbeilu Culture, and Those Beyond the Borders of China 37

1.4.3 The Prototype of the Northern Zone of China Mongolian Plateau Metallurgical Province 40
References 42

2 The Expansion of Steppe Culture During the Second Millennium B.C. 47
2.1 Andronovo Culture Complex and Seima-Turbino Complex 51
2.1.1 Andronovo Culture Complex and Socketed Battle-Axes in Steppe 51
2.1.2 Characteristics, Dating and Population of the Seima-Turbino Remains 73
2.1.3 Relationship Between the Two Types of Remains 88
2.2 Relevant Remains in China 89
2.2.1 Relevant Remains of the Andronovo Culture Complex Found in Xinjiang 89
2.2.2 Socketed Battle-Axes in Xinjiang and the Northern Zone 104
2.2.3 Hollow-Head Axes in Xinjiang and the Northern Zone of China 107
2.2.4 Bronze Spears with Seima-Turbino Characteristics Found in China 110
2.3 The Cultural Relations Between China and the Steppe Zone During the 2nd Millennium B.C. 111
2.3.1 Expansion of the Andronovo Culture Complex in Xinjiang 112
2.3.2 The Spread of Socketed Battle-Axes 115
2.3.3 Spread of Axes 120
2.3.4 Seima-Turbino-Type Bronze Spears 123
2.3.5 Summary 124
References 125

3 The Emergence and Expansion of Bronzes in the Northern Zone of China 133
3.1 Emergence of the Northern Bronzes 134
3.1.1 Northern Bronzes During the Early Shang Period 134
3.1.2 Northern Bronzes from the Late Shang to West Zhou 138
3.1.3 Evolution of the Major Bronzes 149
3.2 Eurasian Steppe at the End of the 2nd Millennium B.C. 164
3.2.1 The Kazakh Steppes, Eastern European Steppe, and Forest Steppes in the Post-Seima Period 164
3.2.2 Early Bronzes from the Mongolian Region 166
3.2.3 The Karasuk Culture in the Minusinsk Basin 170

3.3 The Spread of Chinese Northern Bronzes . . . 176
3.3.1 The Influence of Northern Bronzes on Central Plain Culture . . . 177
3.3.2 The Influence of Northern Bronzes on the North of the Yanshan Mountains . . . 189
3.3.3 The Relationship Between Northern Bronzes and the Mongolian Plateau . . . 198
3.3.4 The Relationship Between Northern Bronzes and the Minusinsk Basin . . . 202
3.3.5 The Influence of the Northern Bronzes on the Steppes Beyond the Border, Taking the Bronze Short Sword as an Example . . . 208
References . . . 216

4 The Beginning of the Early Nomadic Age . . . 227
4.1 The Beginning of the Nomadic Culture of the Eurasian Steppe . . . 228
4.1.1 The Pontic Area and the Kuban River Basin: The Pre- and Early Scythian Cultures . . . 228
4.1.2 Southern Siberia in Russia: The Arzhan Kurgan . . . 233
4.1.3 Slab Grave Culture on the Mongolian Plateau and in Transbaikal . . . 243
4.2 The Predecessor of Nomadic Civilization in the Northern Zone of China . . . 245
4.2.1 Upper Xiajiadian Culture . . . 246
4.2.2 Kayue Culture . . . 257
4.3 Contact Between the Northern Zone of China and the Eurasian Steppe . . . 261
4.3.1 The Relationship Between the Upper Xiajiadian Culture and the Slab Grave Culture . . . 261
4.3.2 Cultural Interaction Between the Upper Xiajiadian Culture and Southern Siberia and the Black Sea . . . 263
4.3.3 Division of the Middle and Eastern Eurasian Steppe and Their Characteristics . . . 267
4.4 Hypothesis on Reasons to Transition from Animal Husbandry to Nomadic Pastoralism . . . 271
References . . . 274

5 The Northern Zone of China and the Eurasian Steppe in the Early Iron Age . . . 279
5.1 The Prosperous Nomadic Culture in the Eurasian Steppe . . . 279
5.1.1 The Scythian Culture . . . 279
5.1.2 The Sauro-Sarmatian Culture . . . 287
5.1.3 The Saka Culture . . . 298

5.1.4 The Tagar Culture 319
5.1.5 The Early Nomadic Culture in the Tuva Area 332
5.1.6 The Early Nomadic Culture in the Altai Region 339
5.1.7 The Slab Grave Culture 348
5.2 Formation of the Northern Cultural Belt of China 351
5.2.1 The Sites of the Di in Northern China 352
5.2.2 Remains Related to the Hu in the Northern Zone 373
5.2.3 Differences Between Two Types of Sites in the Northern Zone of China During the Eastern Zhou Period 392
5.3 Interactions Between the Northern Zone of China and the Eurasian Steppe 400
5.3.1 Interactions with the Mongolian Plateau and Transbaikal 400
5.3.2 Interactions with Minusinsk and Tuva 404
5.3.3 Connections with the Altai Region 417
5.3.4 Connections with the Semirechye Region in the Tianshan Mountains 425
5.4 Further Exploration of the Origin of the Xiongnu 437
5.4.1 Comparison of Earliest Xiongnu Remains and the Related Remains of Northern Zone of China and the Mongolian Plateau 438
5.4.2 Discussion 446
References 451

6 Cultural Connections Between the Northern Zone of China and the Eurasian Steppe in Xiongnu Times 465
6.1 Periodization of Xiongnu Remains 465
6.1.1 Description of Related Concepts 465
6.1.2 Periodization of Xiongnu Remains in Mongolia and the Transbaikal Region 467
6.1.3 The Large Tombs of the Xiongnu (Pan 2015b) 476
6.2 Origin and Development of the Cultural Elements of the Xiongnu and Their Communication with Surrounding Areas 493
6.2.1 Analysis of the Cultural Factors of the Xiongnu Remains in the Middle and Late Western Han Period (Pan 2007b) 494
6.2.2 The Spread of the Xiongnu Culture 511
6.2.3 Summary of the Spread of Xiongnu's Cultural Factors and Their Relationship with the Surrounding Ethnic Groups and the Subordinate Countries of Xiongnu 520

6.3 The Transformation of Cultural Interactions Between the Northern Zone of China and the Eurasian Steppe from the Late Warring States Period to the Middle Western Han Period (Pan 2015a) 523
6.3.1 Eurasian Steppe Cultural Features in the Northern Zone of China During the Late Warring States Period 523
6.3.2 The Eurasian Steppe Cultural Factors in the Northern Zone of China During the Western Han Dynasty 526
6.3.3 The Cultural Factors of the Central Plain in the Xiongnu Culture 530
6.3.4 The Opening of the Silk Road and Its Southward Movement 530
References 533

Conclusion 539

Postscript 559